

used to couple the stand-alone peripheral **500** to the mobile unit. The mobile unit discussed in connection with **FIG. 5** and **FIG. 6** may be a generic mobile unit (no indigenous flexible-retractable peripherals) or may include one or more flexible-retractable peripherals but use the external peripheral **500** for further augmentation.

[0049] In the illustrative embodiment **500**, an optional linked rigidity system **520** is included. The links are illustrated as being farther apart than in their actual implementation for purposes of illustration only. A manual mechanical lever or a motorized mechanical stepping device is used to push on the linked rigidity system, for example, from left to right. When each link is joined with its successive link, the links lock together and become rigid. The linked rigidity system allows the flexible retractable display to become rigid once it has been extended to its extended position. This allows the peripheral to be used, once extended, without bending or rolling back up. In some embodiments, more than one linked rigidity system **520** can be used to provide added stability, for example one at the top of the peripheral **515**, one in the middle and one at the bottom. In some embodiments the links can be implemented as a set telescoping and retractable sections. A key element is that a set of mechanical objects are joined together to support rigidity once the flexible-retractable peripheral is extended. For example, whether this support structure is retracted into the housing **505** or whether it is made unrigid by loosening a coupling between links is embodiment-dependent. A preferred embodiment of an aspect of the present invention uses a linked rigidity support structure as schematically illustrated in **FIG. 5**.

[0050] It should be noted that in certain embodiments whereby the peripheral **500** is mounted into a larger system such as a vehicle, guiding tracks or clasps (not shown) may be used to ensure the extended surface **515** remains rigidly in place. The links **520** are an optional aspect of the present invention. The tracked and clasped embodiments are discussed in further detail hereinbelow.

[0051] In an exemplary embodiment, a user has a smart phone that is equipped with a Bluetooth™ connection and a 3G wireless WAN connection. The user carries two peripheral devices **500** in his or her pocket or purse or briefcase; one for a keyboard and one for a display monitor. While mobile, the user uses the smart phone to support mobility applications. When the user is stationary and needs the services of a laptop computer, the flexible-retractable peripherals are brought to their extended states. This triggers a service advertisement sequence using the Bluetooth™ protocol. The mobile unit then initiates a Bluetooth™ service discovery protocol. In response thereto, the peripherals **500** become coupled to provide the smart phone with a keyboard and a display monitor. For a mouse, either a separate Bluetooth™ mouse **317** is used, or a button on the mobile phone's device specific user interface is used, or an input device on one of the flexible-retractable peripherals is used. Also, the mobile phone can include an optical input/output circuit so that the mobile phone itself can be moved around and serve an optical mouse. This allows the user to operate a standard smart phone with a Bluetooth™ connection in substantially the same way as the mobile unit **100** and **300**. Smart phones with one or more peripherals **500** can operate according to the method **200**.

[0052] As is discussed in greater detail in connection with **FIG. 6**, an aspect of the present invention involves mounting the peripheral **500** into a customized user environment. For example, the enclosure **505** can be built into the right-back side of the driver's seat in a car. In this case **FIG. 5** illustrates how a display screen **515** can be extended across the back of the driver's seat so a back-seat passenger can view a retractable screen for computer or video applications, for example. In some such embodiments a set of one or more clasps (not shown) may be mounted to the left-back side of the driver's seat to hold the display surface **515** in place once it is in its extended position. Similarly, a motor could cause the display surface **515** to move along a set of fixed guides to keep the screen **515** on a track. All such embodiments are illustrated by **FIG. 5** and the accompanying textual descriptions of **FIG. 5** and **FIG. 6**. **FIG. 5** is also representative of other customized installations of the peripheral **500** in accordance with the present invention. For example, an airplane environment for air passengers as is discussed in further detail hereinbelow.

[0053] Other such customized installations of the peripheral **500** are contemplated by the general concepts of the present invention. That is, it is anticipated that the peripheral **500** will be mounted into specific user environments controlled or owned either by the user or a third party that makes the peripheral **500**'s services available to the user either under a specific fee structure or without fees in order to supply customer amenities to customer to make their business environment more attractive and enticing to prospective customers. In a business method, a business makes the peripheral **500** available to its customers and practices a variant of the method **600** as described below. In another business method a business supplies the peripheral **500** installed into a customized user environment and practices a variant of the method **600** whereby user fees are assessed to the user. In another business method, the business sells products such as vehicles with the peripheral **500** mounted into specific locations such as the passenger-side dashboard and/or the backs of the front seats. Like roll-up windows, the passengers can mechanically or electronically cause the surface **515** to be extended and can then use the peripheral **500**. Depending on the embodiment, the user may use the peripheral **500** with a hand-held mobile unit or a mobile computing system built directly into the vehicle such as an auto-mounted computer system with Internet access. All such embodiments are anticipated by **FIG. 5** and/or **FIG. 6** and their surrounding descriptions.

[0054] Referring now to **FIG. 6**, a method **600** is illustrated in block diagram form. This method, while being practiced by the stand-alone peripheral **500**, also defines a method that is practiced by a mobile unit. The mobile unit is similar to the mobile unit **100**, but in some embodiments, the mobile unit may not include the flexible-retractable peripheral **135**. The flexible-retractable peripheral (FRP) surface **515** is brought into its extended state (**605**). This action preferably triggers a service advertisement (**610**). In some embodiments the user may further need to press a button to initiate service advertisement or another service negotiation phase. The service advertisement is a message that allows the mobile unit to become aware of the presence of the peripheral **500** through a service discovery protocol (**615**). For example, if the peripheral **500** and the mobile unit communicate using the Bluetooth™ air interface, the Bluetooth™ service discovery protocol may be used.